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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,342	10/21/2003	Naoji Sakamoto	BW-DKT03038	1958
32175	7590	01/11/2006	EXAMINER	
BORGWARNER INC. 3850 HAMLIN ROAD AUBURN HILLS, MI 48326			JOHNSON, VICKY A	
			ART UNIT	PAPER NUMBER
			3682	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/690,342

Applicant(s)

SAKAMOTO, NAOJI

Examiner

Vicky A. Johnson

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear as to the scope of the claim 2. In claim 1 a sprocket is being claimed, with its intended use being used with a silent chain, but in claim 2 the limitation requires "an outermost link plate of the silent chain". It is unclear how the link plate is part of the sprocket.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Thompson (US 2,179,967).

Thompson discloses: a sprocket comprising: a tooth profile with a surface (6), a plurality of teeth around a periphery of the sprocket (see Fig 2), each of the plurality of teeth comprising: a pair of side portions (6) having a first hardness located on opposite

sides of a central portion (10) having a second hardness, wherein the first hardness is greater than the second hardness (col. 1 lines 6-14).

Re claim 2, each of the side portions has a width (see Fig 4).

Re claim 3, the method of forming the device is not germane to the patentability of the device itself. See MPEP 2113.

Re claim 5, the side portions (6) and the central portion (10) of the plurality of teeth are formed of discrete members integrated together (see Fig 3).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson (US 2,179,967) in view of Cole et al (US 5,711,187).

Thompson discloses a sprocket as described above, but does not disclose that the sprocket and the plurality of teeth are formed of a sintered alloy and the pair of side portions of the plurality of teeth have a density greater than the central portion of the plurality of teeth.

Cole et al teaches the use of a sprocket and the plurality of teeth (20) formed of a sintered alloy and the pair of side portions (22) of the plurality of teeth having a density greater than the central portion of the plurality of teeth (col. 4 lines 2-4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sprocket of Thompson so that the side portions of the plurality of teeth having a density greater than the central portion of the plurality of teeth as taught by Cole et al in order to increase wear resistance (col. 1 lines 11-16).

Response to Arguments

Some further comments regarding the applicant's remarks are deemed appropriate.

The applicant argues that the Thompson reference fails to meet the limitations of the claims because Thompson fails to disclose a surface for contacting the silent chain, which is intended use. The first and second side portions are capable of contacting a chain and therefore meet the limitations of the claims.

It is also argued that the claim 2 is not indefinite, but the limitation referring to the thickness of the silent chain does not further limit the sprocket, but further limits the chain, which is intended use.

The applicant's remarks have been accorded due consideration, however, they are not deemed fully persuasive.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1,870,801 Engstrom (sprocket)

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vicky A. Johnson whose telephone number is (571) 272-7106. The examiner can normally be reached on Monday-Friday (7:00a-3:30p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6217. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3682

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Vicky A. Johnson 11/6/84
Primary Examiner
Art Unit 3682